

 Independent Verification & Validation Facility	Project Management	IVV 09-4 Revision: M Effective Date: March 2003
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APPROVAL SIGNATURES		DATE
Gregory Blaney (original signature on file)	QMS Management Representative	3/21/03

REVISION HISTORY			
Rev No.	Description of Change	Author	Effective Date
Basic	Initial Release	Greg Blaney IT/387	01/30/98
A	Numerous changes in content throughout entire document	Greg Blaney IT/387	04/07/98
B	Changed document format and added sections 6.3.5 & 6.3.6	Greg Blaney IT/387	05/06/98
C	Added new terms in Section 3.0 Definitions. Added two new sections called "Inspection and Test of Product" as section 6.5.1.3 and "Inspection and Test Status" as section 6.5.1.4. The "Control of Nonconforming Product" section changed from 6.5.1.3 to 6.5.1.5; and Added references to SLPs IVV 09-1, IVV 09-2, and IVV 09-3. Added notes in sections 6.3, 6.4, and 6.5.2 referring to the OSMA SLP IVV 09-3 when areas of this SLP did not apply.	Greg Blaney IT/387	07/24/98
D	Quality Record - format changes	Greg Blaney IT/387	08/26/98
E	Section 6.2 – Removed electronic file req. Sections 6.5.1.3 & 6.5.1.4 – Added reference to the 5-day grace period and added "Deliverable Acceptability Status" email req. Section 6.5.2 – Added "Monthly Financial Assessment" email req. Section 8 – Added both records mentioned above.	Greg Blaney IT/387	09/11/98
REVISION HISTORY continued on next page			

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F	Added IVV 01 to Referenced Docs. Sections 6.3.4, 6.4.1, 6.5.1.2, 6.5.1.4, and 8.0 are modified as follows: added a Formal Agreement checklist, a new section, some references, and changed the Concurrence Sheet responsibility.	Greg Blaney IT/387	01/20/99
G	Added definition for Senior Staff (section 3.4), and modified section 6.5.1.4 to include a Senior Staff review process for high level documents.	Greg Blaney IT/387	04/14/99
H	References to Ames Quality Manual replaced with references to IV&V Facility Quality Manual and Added Section 3.11	Greg Blaney IT/387	09/10/99
I	Format and Number changes; Delete Reference to Ames Research Center	Griggs	12/06/00
J	Significant re-write to accommodate current PM process based upon transition to GSFC	Greg Blaney	04/03/01
K	Clarify requirement for Project Managers to maintain copies of task orders.	John Gatto	05/15/02
L	Remove COTR requirements and include instructions for Mission Tracking Matrix.	John Gatto	10/31/02
M	Expanded Control on Nonconforming Product and added information regarding PMRs.	John Gatto	3/24/03

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REFERENCE DOCUMENTS	
Document Number	Document Title
Current versions posted by NASA	Federal Acquisition Regulations and Supplements
NPD 7120.4	NASA Policy Directive for Program/Project Management
NPG 1441.1	NASA Records Retention Schedules
IVV 01/02	Management Responsibility and Authority for Quality System Effectiveness System Level Procedure
IVV 08	Contracting Officer Technical Representative (COTR) Procedure
IVV 09-1	Independent Verification and Validation System Level Procedure
IVV 09-2	Independent Assessments System Level Procedure
IVV 09-8	Project Start-up
IVV 14	Corrective and Preventative Action System Level Procedure
IVV 16	Control of Quality Records System Level Procedure

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1.0 Purpose

The purpose of this procedure is to establish a consistent and documented method of performing project management at the NASA Independent Verification and Validation (IV&V) Facility.

2.0 Scope

The scope of this procedure is subservient to and adheres to the higher level NASA NPD 7120.4, the NASA Policy Directive for Program/Project Management.

This procedure applies to all IV&V Facility personnel who perform project management for Independent Verification and Validation (IV&V), Independent Assessment (IA), or System/Software Engineering tasks for the IV&V Facility. For projects established prior to the requirements stated in this SLP taking affect, deviations to this procedure will be documented by the Project Manager (PM) and approved by Management. This deviation document for each appropriate project shall be provided to the Administrative Staff to be filed in each Project File in accordance with Section 8 of this procedure and in accordance with the Facility's System Level Procedure titled Control of Quality Records (IVV-16).

3.0 Definitions

3.1 IV&V Facility Management

NASA personnel holding official management positions at the IV&V Facility as described in the IV&V Facility's System Level Procedure (SLP) titled Management Responsibility and Authority for Quality System Effectiveness (IVV-01/02).

3.2 Project Manager (PM)

IV&V Facility civil servant personnel, appointed by IV&V Facility Management, who perform project management functions.

3.3 Independent Verification and Validation (IV&V)

A core process function performed by the IV&V Facility. See System Level Procedure IVV 09-1 for more explanation and detail.

3.4 Independent Assessments (IA)

A core process function performed by the IV&V Facility. See System Level Procedure IVV 09-2 for more explanation and detail.

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3.5 Project

For the context of this SLP, a project is any IV&V, IA, or System/Software-Engineering task being performed by the IV&V Facility for a customer.

3.6 Contracting Officer Technical Representative (COTR)

A NASA civil servant responsible for the technical management of a contract and other duties as described in the NASA Federal Acquisition Regulations (FARs) and Supplements.

3.7 Formal Agreement (FA)

A document used to identify the managerial, technical and business aspects of an agreement between the IV&V Facility and a customer to perform an IV&V, IA, or System/Software Engineering task.

3.8 IV&V Facility Concurrence Form (IV&V Form #1007)

An IV&V Form used to capture concurrence by IV&V Facility management or a PM that a product has been reviewed and is acceptable for distribution.

3.9 IV&V Team

The IV&V team associated with a specific project consists of IV&V Facility management, the PM, a Facility Resource Management Office (RMO) person, and applicable subcontractors along with the associated COTR.

3.10 Resource Management Office (RMO)

The IV&V Facility's civil servant team who is responsible for the management and reporting of IV&V Facility financial resources.

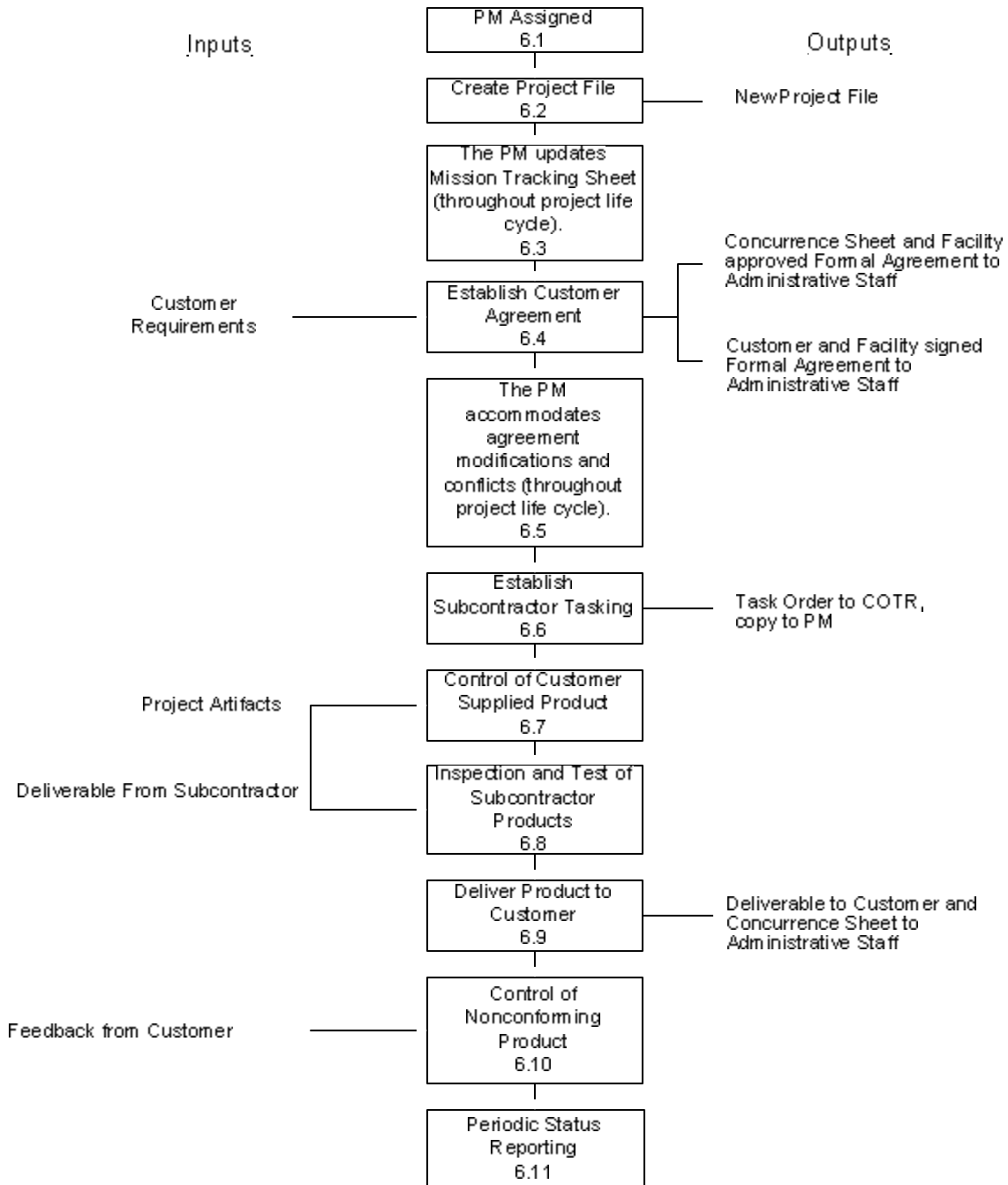
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3.11 Acronyms

CO	Contracting Officer
COTR	Contracting Officer Technical Representative
C/PAR	Corrective/Preventive Action Request
IV&V	Independent Verification and Validation
FA	Formal Agreement
FAR	Federal Acquisition Regulations
IA	Independent Assessment
MOA	Memorandum of Agreement
NPD	NASA Policy Directive
PM	Project Manager
PMR	Project Management Review
RMO	Resource Management Office
SLP	System Level Procedure
FRC	Federal Records Control

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4.0 Flowchart



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5.0 Responsibilities

Responsibilities are defined in Section 6.0 of this SLP.

6.0 Procedure

This procedure establishes a consistent and documented method of performing project management at the NASA IV&V Facility. This procedure is to be followed by each IV&V Facility PM. The PM must also follow IVV 09-8 Project Start-up when performing IV&V or IA Start-ups.

6.1 Assign Project Manager (PM)

Facility Management shall assign an IV&V Facility civil servant as the PM for each project performed by the IV&V Facility for a customer.

6.2 Create Project File

The PM shall provide sufficient information to the IV&V Facility Administrative Staff to enable the establishment of a Project File in the IV&V Facility's filing system by the Administrative Staff for each project. The Administrative Staff will create the project file in accordance with the Facility's System Level Procedure titled Control of Quality Records (IVV-16).

6.3 Update Mission Tracking Sheet

A matrix identifying IV&V Mission Milestones is available on the Facility's shared drive. Major review points within the process of establishing new IV&V and IA projects are captured in this matrix. This matrix allows management to observe the effectiveness of each segment of the process and identify trends. PMs assigned to each mission represented are responsible for updating, maintaining and keeping the Mission Tracking Sheet current. Items being tracked may include:

- Date of initial contact
- Date of self assessment
- Date of Facility review of self assessment
- Date of start-up MOA
- Date of start-up dollars arriving/ Date of 506
- Date task order signed
- Date of IV&V/IA
- Date of dollars arriving/ Date of 506
- Date of task order modification
- Remarks

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6.4 Establish Customer Agreement

For each project, the PM shall negotiate an agreement with the designated point of contact representing the customer. This agreement will document the managerial, technical and business aspects of the tasks to be performed for the customer as described in detail below.

6.4.1 Determine Type of Agreement

The PM and customer shall determine the form of the agreement to be utilized between the IV&V Facility and the customer. Agreements may take the form of, but are not limited to, a Memorandum of Agreement (MOA), a task agreement, an Interagency Agreement, or a contract. An MOA is the IV&V Facility's preference. Throughout the rest of this SLP, this agreement between the IV&V Facility and customer will be referred to as the Formal Agreement (FA).

6.4.2 Identify Project Team

Once the PM has identified the initial scope of the work to be performed for the customer, the PM will coordinate with Facility management, RMO, and COTRs to identify the project team.

6.4.3 Negotiate Agreement

The PM and project team will negotiate the content of the FA with the customer. The FA shall contain but is not limited to the following information:

- Purpose
- Scope
- Duration
- Schedule and Milestones
- Points of Contact
- Roles and Responsibilities
- Deliverables
- Tasks to be performed
- Resources
- Budget
- Issue Resolution
- Signature lines for both parties (IV&V Facility and Customer)

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6.4.4 Obtain Facility's Review and Approval of FA

Upon completing the negotiation of the FA with the customer, the PM shall present the proposed agreement to IV&V Facility management for review and approval. Upon accommodating management comments, the PM will formally submit the FA to IV&V Facility management, RMO and the COTR for signature using an IV&V Facility Concurrence Form, IV&V Form #1007. Approval using the Concurrence Form must be obtained prior to officially submitting the FA to the customer for review and signature.

6.4.5 File Facility Approved FA and Corresponding Concurrence Form

The completed Concurrence Form and a copy of the signed FA shall be provided to the Administrative Staff to file in the appropriate Project File as a Quality Record per section 8 of this procedure and in accordance with IVV-16.

6.4.6 Obtain Customer's Review and Approval of FA

After receiving Facility concurrence per paragraph 6.3.4 above, the FA shall be sent to the customer for review and signature. A copy of the customer signed FA is to be obtained by the PM for the Facility's records. Modifications required by the customer during their review process must again go through the review and concurrence process described in the paragraphs above and re-submitted to the customer for review and signature.

6.4.7 File Customer Approved FA

Upon receipt of the customer signed FA, the PM shall ensure that a copy of the FA is provided to the Administrative Staff to file in the appropriate Project File as a Quality Record per section 8 of this procedure and in accordance with IVV-16.

6.5 Accommodate Agreement Issues

The following sub-paragraphs define how modifications or conflicts associated with the FA shall be accommodated.

6.5.1 Modifications to Agreement

If any party requires modifications to the FA after being signed by the customer and IV&V Facility, the PM will again follow the procedures in this section of this SLP beginning with paragraph 6.4.4.

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6.5.2 Conflict Resolution

If an issue arises either during the negotiation of the FA or during the performance of the agreement that can not be resolved by the PM and the customer point of contact, the PM will notify Management. Management will then be responsible to coordinate with the appropriate customer personnel to resolve the issue.

6.6 Establish Subcontractor Tasking

Based upon the FA with the customer, the PM shall coordinate with the subcontractor and associated COTR to establish the required tasking mechanisms with the subcontractor.

6.6.1 Draft Task Order

The PM will work with the subcontractor, COTR, and RMO to generate a Task Order that will provide direction and authorization to the subcontractor to perform the tasks associated with the FA between the IV&V Facility and customer.

6.6.2 Obtain Task Order Review and Approval

Each Task Order must be reviewed and approved by the PM, RMO, COTR, and Contracting Officer (CO) prior to the initiation of work by the subcontractor. The PM shall utilize the Task Order generation process and approval/route sheet as established in each contract with the subcontractor.

6.6.3 Retain Copy of Completed Task Order

The PM shall maintain a copy of the completed Task Order when provided by the COTR.

6.7 Control of Customer Supplied Product and Product Identification and Traceability

The PM is responsible through the subcontractor that appropriate customer supplied products (i.e. documents, code, databases, etc.) are used when performing tasks and that the subcontractor identifies that product in the resulting report/output (i.e. version, date, etc.).

6.8 Inspection and Test of Product From Subcontractor

Every project related product required to be delivered to the IV&V Facility by a contract or Task Order between the subcontractor and the IV&V Facility, must be evaluated for quality and the results recorded.

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6.8.1 Evaluation of Deliverables

Each PM is responsible for evaluating each project specific Deliverable (i.e. Monthly Status Report, Technical Reports, etc.) and the portions of contract level reports that contain project specific sections (i.e. Monthly Progress Report, 533M, etc.) within 10 working days of delivery. If the product is deemed acceptable, the PM will send an email to the COTR indicating the accepted status per the instructions in paragraph 6.8.2 below titled "Email Instructions". If the product is deemed unacceptable and corrective responses are provided to the subcontractor by the PM within the 10 day period and the subcontractor re-issues an acceptable product within an additional 4 working days, the product will be deemed acceptable and an email shall be submitted to the COTR by the PM indicating acceptability. If no corrective responses are provided to the subcontractor within the 10 days, the product is automatically contractually deemed acceptable and the PM will send an email indicating acceptability. If corrective responses are provided to the subcontractor within the 10 day period, but the subcontractor can not produce an acceptable Deliverable within an additional 4 working days, the PM will deem the Deliverable unacceptable and so indicate in an email to the COTR. Only one email message is expected from the PM for each Deliverable.

6.8.2 Email Instructions

Each PM shall send an electronic mail message (email) titled "Deliverable Acceptability Status" to the COTR for each product inspected identifying the deliverable, the date of the deliverable, whether it was acceptable or not, and any pertinent comments regarding the results of the inspection.

6.9 Deliver Product to Customer

The PM assigned to each project by IV&V Facility Management is responsible for ensuring that all products delivered to a customer are of quality and in a format acceptable to the customer. The product may be delivered electronically or by hardcopy as required by the agreement with the customer after being reviewed and assessed for quality by the PM per the process identified below in this SLP.

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6.9.1 PM Review and Concurrence

Prior to any product being delivered to a customer, the PM shall review the product and concur with its quality. The PM shall complete and sign an IV&V Facility Concurrence Form, IV&V Form #1007, identifying the title of the Deliverable, the date of the Deliverable, and the electronic location of the Deliverable.

6.9.2 File Deliverable and Concurrence Form

The PM shall submit the completed and signed IV&V Facility Concurrence Form for each product provided to a customer to the Administrative Staff to file in the appropriate Project File as a Quality Record per section 8 of this procedure and in accordance with IVV-16. The PM will save an electronic version of the product delivered to the customer on a Facility shared drive. If the product can only be produced in a hardcopy form, a copy shall accompany the concurrence sheet when filed by the Administrative Staff.

6.10 Control of Nonconforming Product

Because the IV&V Facility produces independent analysis products that customers may not agree with, disagreement with the analysis does not constitute a nonconformance subject to this section of this SLP. If the customer identifies a product produced by the IV&V Facility as nonconforming (i.e. an inappropriate format or because it was performed on the wrong customer product), the PM shall complete a Corrective Action Request (CAR) form per IVV-14. The PM is responsible for resolving the issue with the customer. Once the nonconforming product is corrected it shall be subjected to its established verification process once again. The C/PAR process insures Facility management is involved and that the problem is resolved and documented.

6.11 Periodic Status Recording

The PM shall prepare a Project Management Review (PMR) to report to higher level Facility Management. The PMR shall be presented on a periodic basis, during the weekly staff meeting. The PMR shall contain a project overview, financial and other status, contributions and issues.

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7.0 Metrics

This section is not applicable to this process.

8.0 Records

The following records will be generated and filed either on a Facility shared network drive, in the PMs file or in the Project File by the Administrative Staff in accordance with IVV 16 and reference to NPG 1441.1 NASA Records Retention Schedules.

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Document Name and Identification Number	User Responsible for Record Retention	Retention Requirement	Location
Deviation Document	Project Manager	Permanent - Retire to FRC when file is closed	Administrative Project File
Concurrence Form (IV&V Form 1007) for associated Formal Agreement Submitted to Customer	Project Manager	Permanent - Retire to FRC when file is closed	Administrative Project File
Formal Agreement signed by Customer	Project Manager	Permanent - Retire to FRC when file is closed	Administrative Project File
Copy of Task Order	Project Manager	Temporary- Discard when Project ends or when Task Order is modified	PM Files
Product Delivered to Customer	Project Manager	Permanent - Retire to FRC when file is closed	Shared Network Drive
Deliverable Acceptability Status	COTR	Permanent - Retire to FRC when file is closed	Shared Network Drive
Concurrence Form (IV&V Form 1007) for Customer Deliverables	Project Manager	Permanent - Retire to FRC when file is closed	Administrative Project File